

REMARKS

Foreign Application Priority Date

The Filing Receipt dated May 22, 2002, indicates priority claimed to a Foreign Application – UNITED KINGDOM 9913764.8 – which incorrectly states the foreign filing date as “02/28/1999”. The correct foreign filing date for application GB 9913764.8 is June 14, 1999. Applicants respectfully request that the Filing Receipt be corrected to indicate priority claimed to Foreign Applications as “UNITED KINGDOM 9913764.8 06/14/1999”. A certified copy of application GB 9913764.8 is included with this paper.

Application Amendments

Claims 1-6 and 8-10 are pending in the present application. No additional claims fee is believed to be due.

Claim 7 is canceled without prejudice.

Claims 1-3 have been amended to recite that the hair care composition comprises at least one ester derivative of tyrosine. This subject matter was recited in original claim 7. Further support for this amendment can be found at page 7, lines 6-9 of the specification.

Claim 4 has been amended to recite that the water solubility of at least 0.1g/l is at 25°C. Support for this amendment can be found in the original claim 4 and at page 4, line 17 of the specification.

Claim 8 has been amended to recite that the tyrosine compound is an alkyl or aryl ester derivative of tyrosine. Support for this amendment can be found in the original claim 8 and at page 7, line 3 of the specification.

Claim 9 has been amended to recite that the tyrosine compound is a C₁-C₄ alkyl ester derivative of tyrosine. Support for this amendment can be found in the original claim 9 and at page 7, lines 4-5 of the specification.

It is believed these changes do not involve any introduction of new matter. Consequently, entry of these changes is believed to be in order and is respectfully requested.

Rejection Under 35 USC 112, Second Paragraph

Claim 9 is rejected under 35 USC 112, second paragraph, as being indefinite in that it states “said tyrosine compound is a C₁-C₄.” Claim 9 has been amended as described above. Therefore, it is believed that this rejection has been obviated.

Rejections Under 35 USC 102(b)

GB 987,800 to Shiseido Co., Ltd. or DE 1,617,477 to Fischer

Claims 1, 2, 4, 5, and 10 are rejected under 35 USC 102(b) as being anticipated by GB 987,800 to Shiseido Co., Ltd. ("Shiseido") or DE 1,617,477 to Fischer ("Fischer"). First, the Examiner states that Shiseido discloses cosmetic compositions which contain a variety of amino acids and which can be used generally as hair creams, hair tonics, and skin lotions. Second, the Examiner states that Fischer discloses a hair tonic composition which contains a variety of amino acids and which is intended to be used to promote hair growth. Applicants respectfully traverse the present rejection based on the following comments.

As currently amended, Applicants' claimed invention requires a hair care composition comprising at least one *ester derivative of tyrosine* and at least one other amino acid compound selected from tryptophan compounds, histidine compounds and lysine compounds. While both Shiseido and Fischer disclose hair care compositions comprising at least one of a variety of amino acids, neither reference discloses a hair care composition that requires specifically the combination of at least one ester derivative of tyrosine along with at least one other amino acid compound selected only from tryptophan compounds, histidine compounds and lysine compounds. Specifically, Shiseido fails to disclose ester derivatives of tyrosine. Fischer also fails to disclose ester derivatives of tyrosine. Each and every element of Applicants' claims 1, 2, 4, 5, and 10 is not disclosed in either reference, thus neither Shiseido nor Fischer is anticipatory. Therefore, the present invention is novel over Shiseido and Fischer.

Further, Applicants' claimed invention is not obvious in view of Shiseido. Shiseido broadly discloses a list of nineteen exemplary amino acids, one or more of which may be used in the cosmetic compositions of Shiseido. However, Shiseido fails to teach or to suggest that the combination of specific amino acid compounds for use in hair care compositions can be beneficial. In contrast, Applicants have found that certain amino acids are reduced in damaged hair in comparison with undamaged hair. In particular, it has been found that cysteine, tyrosine, lysine, histidine, methionine, and tryptophan are at reduced levels in damaged hair. Hair care compositions of the present invention impart strength to and improve the condition of damaged hair by the specific combination of amino acid compounds now claimed.

Applicants' claimed invention is also not obvious in view of Fischer. Fischer discloses a hair tonic composition which contains a variety of amino acids and which is intended to be used to promote hair growth. Thus, the benefit of the composition of Fischer is targeted at the hair root and hair follicle. In contrast, the hair care compositions of Applicants' invention target the hair shaft, providing the benefit of improved strength and condition of the hair. The nature of the problem to be solved in Fischer differs from the nature of the problem to be solved by Applicants' invention, and, therefore, no motivation is present which would lead one of ordinary skill in the art to the specific combination of amino acid compounds as now claimed.

Therefore, currently amended claim 1, as well as claims 2, 4, 5, and 10, are novel and nonobvious over the prior art of record.

US Patent No. 4,201,235 to Ciavatta or US Patent No. 5,053,230 to Gazanni

Claims 1-5 and 10 are rejected under 35 USC 102(b) as being anticipated by US Patent No. 4,201,235 to Ciavatta ("Ciavatta") or US Patent No. 5,053,230 to Gazanni ("Gazanni"). The Examiner states that Ciavatta discloses cosmetic compositions containing amino acid-vitamin formulations for topical application to the skin, hair, and scalp. Additionally, the Examiner states that a method of treating the scalp with a composition containing a variety of amino acids is disclosed in Ciavatta. Next, the Examiner states that Gazanni discloses cosmetic compositions which contain nutrients and a variety of amino acids and which can be used for promoting trophism of hair follicles. The Examiner also asserts that examples of hair lotions are disclosed in Gazanni. Applicants respectfully traverse the present rejection based on the following comments.

As currently amended, Applicants' claimed invention requires a hair care composition comprising at least one *ester derivative of tyrosine* and at least one other amino acid compound selected from tryptophan compounds, histidine compounds and lysine compounds. While both Ciavatta and Gazanni disclose compositions comprising at least one of a variety of amino acids, neither reference discloses a hair care composition that requires specifically the combination of an ester derivative of tyrosine along with at least one other amino acid compound selected only from tryptophan compounds, histidine compounds and lysine compounds. Specifically, both Ciavatta and Gazanni fail to disclose ester derivatives of tyrosine. Each and every element of Applicants' claims 1-5 and 10 is not disclosed in either reference. Accordingly, the present claims are novel over the prior art of record.

Further, Applicants' claimed invention is not obvious in view of Ciavatta. Ciavatta broadly discloses a number of amino acids which may be used in the cosmetic compositions of Ciavatta. However, Ciavatta fails to teach or to suggest that the specific combination of an ester derivative of tyrosine along with at least one other amino acid compound selected only from tryptophan compounds, histidine compounds and lysine compounds, for use in hair care compositions can be beneficial. In contrast, Applicants have found that certain amino acids are reduced in damaged hair in comparison with undamaged hair. In particular, it has been found that cysteine, tyrosine, lysine, histidine, methionine, and tryptophan are at reduced levels in damaged hair. Hair care compositions of the present invention impart strength to and improve the condition of damaged hair by the specific combination of amino acid compounds now claimed.

Additionally, Applicants' claimed invention is not obvious in view of Gazanni. Gazanni broadly discloses a number of amino acids which may be used in the cosmetic compositions of Gazanni. However, Gazanni fails to teach or to suggest that the specific combination of an ester

derivative of tyrosine along with at least one other amino acid compound selected only from tryptophan compounds, histidine compounds and lysine compounds, for use in hair care compositions can be beneficial. Additionally, the compositions of Gazanni are intended for promoting trophism of hair follicles. In contrast, as stated above, Applicants' hair care compositions impart strength to and improve the condition of damaged hair by targeting the hair shaft with a specific combination of amino acid compounds including an ester derivative of tyrosine. The benefit of Applicants' hair care compositions target the hair shaft, not the hair follicle. The nature of the problem to be solved in Gazanni differs from the nature of the problem to be solved by Applicants' invention, and, therefore, no motivation is present which would lead one of ordinary skill in the art to the specific combination of amino acid compounds as now claimed.

Therefore, currently amended claim 1, as well as claims 2-5 and 10, are novel and nonobvious over the prior art of record.

Rejections Under 35 USC 103(a)

GB 987,800 to Shiseido Co., Ltd. or DE 1,617,477 to Fischer or US Patent No. 4,201,235 to Ciavatta or US Patent No. 5,053,230 to Gazanni in view of US Patent No. 5,290,562 to Meybeck et al.

Claims 7-9 are rejected under 35 USC 103(a) as being unpatentable over any of GB 987,800 to Shiseido Co., Ltd. ("Shiseido") or DE 1,617,477 to Fischer ("Fischer") or US Patent No. 4,201,235 to Ciavatta ("Ciavatta") or US Patent No. 5,053,230 to Gazanni ("Gazanni") in view of US Patent No. 5,290,562 to Meybeck et al. ("Meybeck"). Shiseido, Fischer, Ciavatta, and Gazanni, all discussed above, disclose compositions which contain a variety of amino acids. None of these references teach Applicants' claimed ester derivative of tyrosine. The Examiner states that Meybeck discloses cosmetic compositions which contain methyl tyrosinate, ethyl tyrosinate, or stearyl tyrosinate, and which can be used for "increasing the content of melanin and thus improve hair complexion." Office Action at page 4. The Examiner further asserts that Meybeck teaches the use of tyrosine esters, such as methyl or ethyl tyrosinate, incorporated in liposomes in cosmetic compositions because tyrosine does not easily penetrate across the corneum layer of the skin. Thus, the Examiner alleges, it would have been obvious for one of ordinary skill in the art to substitute tyrosine in the amino acid compositions of Shiseido, Fischer, Ciavatta, or Gazanni with methyl or ethyl tyrosinate "with an expectation to increase the penetration of tyrosine across corneal [sic] layer, increase the melanin formation and thus increase the hair complexion." Office Action at page 4. Applicants respectfully traverse the present rejection based on the following comments.

As presently amended, claim 1 incorporates the subject matter of previous claim 7 which has been canceled without prejudice. Applicants' claimed invention requires a hair care composition comprising at least one ester derivative of tyrosine and at least one other amino acid compound selected from tryptophan compounds, histidine compounds and lysine compounds. Shiseido, Fischer, Ciavatta, and Gazanni disclose compositions which contain a variety of amino acids, but none of these references teach or suggest Applicants' claimed ester derivative of tyrosine. Meybeck discloses methyl and ethyl tyrosinate. However, Meybeck provides no suggestion or motivation for one of ordinary skill in the art to substitute methyl or ethyl tyrosinate for tyrosine in Shiseido, Fischer, Ciavatta, or Gazanni.

Meybeck offers no suggestion or motivation to substitute methyl or ethyl tyrosinate for tyrosine in the compositions of the other cited references. "When determining the patentability of a claimed invention which combines [several] known elements, the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination." *In re Beattie*, 974 F.2d 1309, 1311 (Fed. Cir. 1992). Moreover, "it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013, 1016 (CCPA 1972). Additionally, "[t]he mere fact that the prior art [can] be so modified [does not make] the modification obvious unless the prior art suggest[s] the desirability of the modification." *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984).

Although Meybeck discloses compositions with methyl and ethyl tyrosinate, Meybeck teaches that these compositions are useful because of their pigmenting activity in the skin. The compositions of Meybeck are intended for use in compositions such as those capable of accelerating the tanning of the skin. Meybeck teaches and claims compositions and their methods of use for increasing melanin formation on the skin and the scalp. Clearly, the compositions of Meybeck target the skin or scalp to provide the disclosed benefit of increasing melanin formation in the skin. In contrast, the hair care compositions of Applicants' invention target the hair shaft, providing the benefit of improved strength and condition of the hair by the specific combination of amino acid compounds now claimed. The Examiner alleges that it would have been obvious to one of ordinary skill in the art to substitute methyl or ethyl tyrosinate for tyrosine in the compositions of Shiseido or Fischer or Gazanni or Ciavatta with the expectation to increase the penetration of tyrosine across the corneum and thus increase melanin formation. However, Applicants respectfully submit that Meybeck fails to teach or suggest that targeting the skin or scalp to increase melanin formation in the skin also has the effect of improving the strength and condition of the hair shaft. Additionally, none of Shiseido, Fischer, Gazanni, or Ciavatta teaches or suggests that increasing melanin formation in the skin or scalp also has the effect of improving

the strength and condition of the hair shaft. The nature of the specific problem to be solved in Meybeck differs from the nature of the problem to be solved by Applicants' invention. As a result, there is no suggestion or motivation in Meybeck for one of ordinary skill in the art to substitute methyl or ethyl tyrosinate for tyrosine in Shiseido, Fischer, Ciavatta, or Gazanni.

Therefore, currently amended claim 1 as well as claims 8-9, which depend from claim 1, are novel and nonobvious over the prior art of record.

Double Patenting Rejection

US Patent No. 6,544,500 to O'Toole et al.

Claims 1-10 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of US Patent No. 6,544,500 to O'Toole et al. ("O'Toole"). A terminal disclaimer in compliance with 37 CFR 1.321(c) is filed with this paper, therefore, it is believed that this rejection has been overcome.

Rejection Under 35 USC 103(a)

US Patent No. 6,544,500 to O'Toole et al.

Claims 1-10 are rejected under 35 USC 103(a) as being unpatentable over US Patent No. 6,544,500 to O'Toole et al. ("O'Toole"). Applicants respectfully traverse this rejection because the O'Toole reference is not available as prior art against the present application under 35 USC 103(c).

O'Toole issued on April 8, 2003. The present application has a priority date of June 14, 1999. This means that the O'Toole reference only qualifies as prior art under 35 USC 102(e). Furthermore, the present application and the O'Toole reference (US Patent No. 6,544,500) were, at the time the claimed invention was made, owned by, or subject to an obligation of assignment to, the Procter & Gamble Company.

35 USC(c) applies to US patent applications filed after November 29, 1999. Since the current application has a filing date after November 29, 1999 (International Filing Date of February 24, 2000), Applicants contend that O'Toole is not available as a reference under 35 USC 103(c).

Conclusion

In light of the amendments and remarks presented herein, it is requested that the Examiner reconsider and withdraw the present rejections. Early and favorable action in the case is respectfully requested.

Applicants have made an earnest effort to place their application in proper form and to distinguish the invention as now claimed from the applied references. In view of the foregoing,

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Applicants respectfully request reconsideration of this application, entry of the amendments presented herein, and allowance of Claims 1-6 and 8-10.

Respectfully submitted,
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